

279-3189

12/4/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 4, 2014

Ms. Shannon Yanocha  
Product Registration Manager  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

Subject: Supplemental Labeling for a New Use in Apple  
Product Name: Spartan Herbicide  
EPA Registration Number: 279-3189  
Associated Petition Number: 3E8202  
Application Date: 3/13/2013  
Decision Number: 483229

Dear Ms. Yanocha

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable under FIFRA Section 3(c)(5). You must submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. At your next label printing, or within eighteen (18) months of the date of this letter, whichever comes first, you must incorporate this supplemental labeling into the main product labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

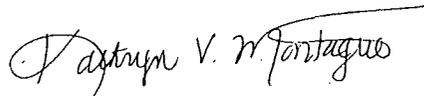
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at Benbow.bethany@epa.gov.

Sincerely,



Kathryn V. Montague, Product Manager 23  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Attachment

# Supplemental Labeling

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## SPARTAN Herbicide

EPA Reg. No. 279-3189  
Expiration Date: December 1, 2017

### DIRECTIONS FOR USE

**ACCEPTED**

12/04/2014

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 279-3189

**IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING. ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED.**

**This Supplemental labeling must be in the possession of the user at the time of pesticide application. Read the label affixed to the container for SPARTAN Herbicide before applying. Carefully follow all precautionary statements and application use directions.**

### APPLES

#### APPLICATION INFORMATION

Apply SPARTAN as a uniform broadcast soil application to orchard floors or as a uniform band application directed to the base of the trunk in trees to provide preemergence control of listed below.

For best control, apply SPARTAN when there are no weeds present or a postemergence herbicide is tank mixed to eliminate emerged weeds.

For broadcast applications, make a single application of SPARTAN at 2.7 to 8.0 dry ounces per acre (0.125 to 0.375 lb ai/A). Do not apply more than 8.0 dry ounces (0.375 lb ai) per acre per twelve-month period. The twelve-month period is considered to begin when the initial application of SPARTAN is applied.

For improved weed management, SPARTAN can be applied in a tank mixture with other preemergence and postemergence burndown herbicides. Refer to the tank mix partner's labels for additional restrictions, including minimum spray volumes and crops in which they are labeled. Burndown herbicides may include, but are not limited to, Aim, Shark, Rage D-Tech, glyphosate, paraquat, Rely, and 2,4-D. Do not tank mix with Chateau® herbicides (flumioxazin) or with other products containing sulfentrazone.

When applied as a banded treatment (50% band or less), SPARTAN may be applied twice per year. Do not apply more than 8.0 dry ounces product per acre (0.375 lb ai/A) on a broadcast application basis per year. Allow a minimum of 60 days between applications.

Use a minimum of 10 gallons of spray solution per acre should be used to ensure uniform spray coverage. Nozzle selection should meet manufacturer's spray volume and pressure recommendations for preemergence and postemergence herbicide applications. The spray solution must have a pH between 5.0 and 9.0.

Only apply SPARTAN to crops that have been established for one full growing season and are in good health and vigor. Avoid contact of the spray solution on the green bark of trunks of young vines and trees by wrapping the trunk with a nonporous wrap, grow tubes, or wax containers which will keep the spray solution from coming in direct contact with the green tissue. Avoid direct or indirect spray contact with crop foliage and fruit.

Use ground equipment only. Do not apply using an airblast sprayer or by air. Do not apply using a mechanically pressurized handgun.

Best results are obtained when the soil is moist at the time of application and the application will be followed by at least ½ inch of rainfall or sprinkler irrigation within two weeks after application. Applications should be timed to take advantage of normal rainfall patterns and cool temperatures, especially where drip or micro sprinkler irrigation is used which may not uniformly incorporate the herbicide.

#### WEED CONTROL INFORMATION

SPARTAN is a selective soil-applied herbicide for the control of susceptible broadleaf, grass and sedge weeds listed below. Adequate moisture of at least ½ inch is required within 14 days after application for optimal control. If adequate rainfall is not received in a timely fashion, irrigate with a minimum of ½ inch of water. When activating moisture is delayed, a reduced level of weed control may occur. These escaped weeds can be removed using a burndown herbicide that is approved for use in apples.

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Tank mix SPARTAN with a burndown herbicide and use an appropriate adjuvant when weeds are present at the time of application. Refer to the tank mix partner's product label for the proper use rates by weed sizes. Use the most restrictive label limitations and precautions of the tank mix product(s).

Residual weed control may be reduced when SPARTAN is applied where heavy crop trash such as leaves and branches and /or weed residues exists. It is best to rake or blow off the leaves and trash when they fall and prior to the SPARTAN application.

Do not apply after petal fall unless using a hooded or shielded sprayer to ensure that the spray solution will not come in contact with the crop or foliage.

**Permanent Crop Weed List**

Common Name	Scientific Name
Amaranth, livid	<i>Amaranthus lividus</i>
Amaranth, Palmer	<i>Amaranthus palmeri</i>
Amaranth, Powell	<i>Amaranthus Powell II</i>
Amaranth, spiny	<i>Amaranthus spinosus</i>
Amaranth, spleen	<i>Amaranthus dubius</i>
Anoda, spurred	<i>Anoda cristata</i>
Barnyardgrass, common	<i>Echinochloa crus-galli</i>
Bedstraw, catchweed	<i>Galium aparine</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Bluegrass, annual	<i>Poa annua</i>
Bromegrass species	<i>Bromus spp.</i>
Burclover, California	<i>Medicago polymorpha</i>
Carpetweed	<i>Mollugo verticillata</i>
Cheatgrass	<i>Bromus tectorum</i>
Cheeseweed species	<i>Malva spp.</i>
Chickweed, common	<i>Stellaria media</i>
Clover species	<i>Trifolium spp.</i>
Copperleaf, hophornbeam	<i>Acalypha ostryeafolia</i>
Copperleaf, Virginia	<i>Acalypha virginica</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Croton, tropic	<i>Croton glandulosus</i>
Crownbeard, golden	<i>Verbesina encelioides</i>
Cupgrass, wooly	<i>Erichloa villosa</i>
Cyperus, hedgehog	<i>Cyperus compressus</i>
Daisy, American	<i>Eclipta alba</i>
Devilscaw	<i>Proboscidea louisiana</i>
Dock, curly	<i>Rumex crispus</i>
Eclipta	<i>Eclipta prostrata</i>
Eveningprimrose, cutleaf	<i>Oenothera laciniata</i>
Fescue, Red	<i>Fetuca rubra</i>
Fiddleneck species	<i>Amsinckia spp.</i>
Filaree, broadleaf	<i>Erodium botrys</i>
Filaree, redstem	<i>Erodium cicutarium</i>
Filaree, whitestem	<i>Erodium moschatum</i>
Fleabane, hairy	<i>Conyza bonariensis</i>
Flixweed	<i>Descurainia sophia</i>
Foxtail, bristly	<i>Setaria verticillata</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria glauca</i>
Galinsoga, hairy	<i>Galinsoga ciliata</i>
Goosegrass	<i>Eleusine indica</i>
Goosefoot, nettleleaf	<i>Chenopodium murale</i>
Groundcherry, clammy (seedling)	<i>Physalis heterophylla</i>
Groundcherry, cutleaf	<i>Physalis angulata</i>
Groundsel, common	<i>Senecio vulgaris</i>
Henbit	<i>Lamium amplexicaule</i>
Horseweed (Marestail)	<i>Conyza canadensis</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Jimsonweed	<i>Datura stramonium</i>

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Johnsongrass	<i>Sorghum halpense</i>
Junglerice	<i>Enchinochloa colona</i>
Knotweed, common	<i>Polygonum arenastrum</i>
Kochia (ALS and Triazine Resistant)	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lettuce, miners	<i>Montia perfoliata</i>
Lovegrass species	<i>Eragrostis spp.</i>
Mallow, common	<i>Malva neglecta wall r.</i>
Mallow, little	<i>Malva parviflora</i>
Mayweed, Chamomile	<i>Anthemis cotula l.</i>
Milkweed, honeyvine	<i>Ampelamus albidus</i>
Morningglory, entireleaf	<i>Ipomoea hederacea integriuscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea hederacea</i>
Morningglory, palmleaf	<i>Ipomoea wrightii</i>
Morningglory, purple	<i>Ipomoea turbinata</i>
Morningglory, red	<i>Ipomoea, coccinea L.</i>
Morningglory, scarlet	<i>Ipomoea coccinea</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, tall	<i>Ipomoea, purpurea</i>
Mullein, turkey	<i>Eremocarpus setigerus</i>
Mustard, Species	<i>Brassica spp.</i>
Mustard, tumble	<i>Sisybrium altissimum</i>
Nettle, burning	<i>Urtica urens</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Orchardgrass	<i>Dactylis glomerata</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Pigweed, prostrate	<i>Amaranthus blitoides</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, Tumble	<i>Amaranthus albus</i>
Pineapple-weed	<i>Chamomilla suaveolens</i>
Plantain, blackseed	<i>Plantago rugelii decne</i>
Plantain, narrow-leaved	<i>Plantago lanceolata</i>
Poorjoé	<i>Diodia teres</i>
Porophyllum	<i>Porophyllum rederale</i>
Poinsettia, wild	<i>Euphorbia heterophylla</i>
Puncturevine	<i>Tribulus terrestris</i>
Purslane, common	<i>Portulaca oleracea</i>
Redmaids	<i>Calandrinia ciliata</i>
Redweed	<i>Melochia corchorifolia</i>
Radish, Wild	<i>Raphanus raphanistrum</i>
Rocket, London	<i>Sisymbrium irio</i>
Sandbur	<i>Cenchrus spinifer</i>
Sedge, annual	<i>Carex spp.</i>
Senna, coffee	<i>Cassia occidentalis</i>
Sheperdspurse	<i>Capsella bursa-pastoris</i>
Sida, prickly	<i>Sida spinosa</i>
Sida, Southern	<i>Sida acuta</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
Smartweed, PA (seedling)	<i>Polygonum pensylvanicum</i>
Smellmellon	<i>Cucumis melo</i>
Sowthistle species	<i>Sonchus spp.</i>
Srangelétop, red	<i>Leptochloa filiformis</i>
Spurge, spotted	<i>Chamaesyce maculate</i>
Starbur, bristly	<i>Acanthospermum hispidum</i>
Stinkgrass	<i>Eragrostis cilianensis</i>
Toadflax, yellow	<i>Linaria vulgaris</i>
Tassleflower, red	<i>Emilio sonchifolia</i>
Thistle, Russian	<i>Salsola kali</i>
Waterhemp, common	<i>Amaranthus rudis</i>

Waterhemp, tall	<i>Amaranthus tuberculatos</i>
Waterprimrose, winged	<i>Ludwigia decurrens</i>
Willowleaf, panicle-leaf	<i>Epilobium brachycarpum</i>
Witchgrass	<i>Panicum capillare</i>

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**ANNUAL AND PERENNIALSEDGE CONTROL INCLUDING NUTSEDGE**

SPARTAN applied at 8.0 dry ounces per acre (0.375 lb ai/A) may provide control or suppression of sedges whether applied preemergence or postemergence to the sedges. Postemergence applications to sedges allow SPARTAN to be taken into the sedge through the foliage as well as soil uptake through the roots. Soil uptake is the major means of uptake by sedges. Good spray coverage is required for optimum control of sedges especially when applying postemergence to the sedges. Use a quality nonionic surfactant (NIC) at the rate of 0.25% v/v when applying postemergence.

**When applied as directed, SPARTAN will provide control or suppression of the following sedges.**

Common Name	Scientific Name
Kyllinga, green	<i>Kyllinga brevifolia</i>
Kyllinga, false green	<i>Kyllinga gracillima</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Sedge, cylindrical	<i>Cyperus retrorsus</i>
Sedge, globe	<i>Cyperus globulosus</i>
Sedge, Surinam	<i>Cyperus surinamensis</i>
Sedge, Texas	<i>Cyperus polystachyos</i>

Optimum control of purple nutsedge may be obtained using split applications of SPARTAN. Apply 2.7 to 4.0 dry ounces per acre followed by a second application to actively growing purple nutsedge. Do not exceed the maximum rate of 8.0 dry ounces (0.375 lb ai/A) per season. SPARTAN symptoms on purple nutsedge will be observed as reduced nutsedge stands, necrosis, chlorosis, and/or stunting. Optimum control may not be observed until the second year after the original treatment.

**REPLANTING IN NEW OR ESTABLISHED ORCHARDS**

Delay replanting at least 30 days after SPARTAN applications when replacing trees in newly planted and established orchards. Use untreated soil when replanting trees.

**Precautions**

- These Crop Specific Use directions are based upon the interactive effects of SPARTAN (sulfentrazone) and the primary soil and environmental factors, which affect its activity on various weed species and tolerance among crops. The user is required to observe the instructions and guidance previously presented under Product Application Instructions, General SPARTAN Product Use Rates, Rotational Crop Guidelines, Replanting Instructions, Weed Controlled and any other section of this label pertinent to the anticipated crop use. It is important to note that not all varieties or cultivars of a given crop species have been evaluated under treatment with SPARTAN. Consult university or extension weed management specialists for additional information on specific local varieties or cultivars and any other pertinent information on SPARTAN under specific local conditions. FMC does not recommend tank mixing this product with other products containing sulfentrazone or other group 14 herbicides as crop injury may occur.

**Restrictions**

- Use ground equipment only. Do not apply SPARTAN using airblast sprayers or by air. Do not apply using a mechanically pressurized handgun.
- Do not apply more than 8.0 dry ounces of product per acre (0.375 lb ai/A) per season.
- Apply to crops that have been growing for at least one full year and are in good condition.
- Avoid direct or indirect spray contact to foliage and green bark (wrap trunk with non-porous wrap, grow tubes, or wax containers to keep spray solution off of green tissue).
- Do not apply to powdery soils or soils where wind may displace the soil, unless irrigation can be applied immediately after application.
- Follow the most restrictive label of tank mix partners including all references to potential carryover and crop injury warnings and restrictions.
- Pre-harvest Interval (PHI) for apples: 14 days
- If two banded treatments are made in a growing season, allow a minimum of 60 days between applications ; however, do not exceed the seasonal maximum use rate.

Label code 112114

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 Agricultural Products Group  
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